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ALCATEL INTERNETWORKING SYSTEM, INC.  
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EXAMINER

ABELSON, RONALD B

ART UNIT	PAPER NUMBER
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2666

DATE MAILED: 10/03/2003

22

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/166,343

Applicant(s)

JOHNSON ET AL.

Examiner

Ronald Abelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 22-24 is/are allowed.
- 6) ☐ Claim(s) 1-3, 5, 7-9, 13, 14, 16 and 18-21 is/are rejected.
- 7) ☐ Claim(s) 4, 6, 10-12 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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***RCE***

1. This application is an RCE.

***Claim objections***

2. Claims 1-12 are objected to because of the following informality listed below. Appropriate correction is required.

In claim 1 line 13 - second state queue - seems to refer to the first occurrence of "second stage queue" on line 9. If this is true, it is suggested to change - second state queue - on line 13 to "second stage queue".

Claims 2-12 are objected since they are dependent upon claim 1.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point

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out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the packet" in lines 11-12. There is insufficient antecedent basis for this limitation in the claim. In addition, claim 1 recites the limitation "the data packet" in line 15. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "the data" in lines 3 and 4. There is insufficient antecedent basis for this limitation in the claim. In addition, claim 4 recites the limitation "the packet" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the data" in lines 3 and 4. There is insufficient antecedent basis for this limitation in the claim. In addition, claim 9 recites the limitation "the packet" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the data" in line 3, "the data packet" in line 4 and "the shared memory switch fabric" in

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line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the data" in line 3 and "the data packet" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 recites the limitation "the packet" in lines 8-9. There is insufficient antecedent basis for this limitation in the claim. In addition, claim 13 recites the limitation "the data packet" in line 12. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "the data" in line 2 and "the packet" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitation "the data" in line 3 and "the packet" in line 4. There is insufficient antecedent basis for this limitation in the claim.

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Claim 21 recites the limitation "the packet" in line 12 and "the data packet" in line 15. There is insufficient antecedent basis for this limitation in the claim.

Claims 2, 3, 5-8, and 10 are rejected since they are dependent upon claim 1.

Claims 14, 16, 19, and 20 are rejected since they are dependent upon claim 13.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this

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application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1, 3, 5, 7-9, 13-14, 16, and 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Bremer (US 6,032,190).

Regarding claims 1, 13-14, and 21, Bremer teaches a method and apparatus for a switching device (fig. 3) for processing data packets (col. 5 lines 19 - 40) from sending ports (fig. 2 box 36, fig. 3 Port 0) to destination ports (fig. 3 Port 3, fig. 2 box 37). The method comprises storing in a first stage queue packet-related data from a sending port (fig. 3 box 64), determining from the packet-related data which destination ports are to receive the packet-related data in the first stage queue (fig. 3 box 68, col. 6 lines 3-10), storing in a second stage queue associated with each determined destination port the packet-related data from the first stage queue based on a characteristic of the packet (prioritize, fig. 3 box 72, col. 6 lines 10-17), and transmitting the packet-related data in the second stage queue to a switch fabric (fig. 3 Port 3, fig. 2 box 37, fig. 2 box 38).

Regarding claim 3, sending the packet-related data from the sending port to the first stage queue (fig. 3 Port 0, box 46, 48).

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Regarding claim 5, the packet characteristic is priority (prioritize, col. 6 lines 10-17).

Regarding claim 7, the packet characteristic is type of service (prioritize, col. 6 lines 10-17). The examiner corresponds type of service with priority.

Regarding claim 8, the packet characteristic is other than unicast or multicast (prioritize, col. 6 lines 10-17).

Regarding claims 9 and 18, each second stage queue includes multiple second stage queues, the data stored in a specific second queue based on a characteristic of the packet (prioritize, fig. 3 box 72, col. 6 lines 10-17).

Regarding claim 16, address resolution logic for sending the packet-related data from the sending port to the first stage queue (fig. 3 box 63, col. 5 line 65 - col. 6 line 2).

Regarding claim 19, the switch fabric is a shared memory switch fabric (fig. 2 box 38). Note, the examiner associates a shared memory switch fabric with a standard switch fabric.



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Regarding claim 20, the switch fabric is a crossbar matrix (fig. 2 box 38). Note, the examiner associates a crossbar matrix switch with a standard switch fabric.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bremer as applied to claims 1 and 13 above, and further in view of Demange (US 5,355,522).

Although Bremer teaches Ethernet, the reference is silent on the packet related data is a pointer to memory and destination ports information.

Demange teaches that Ethernet packets (col. 2 lines 39-42) headers contain a pointer to memory (fig. 4 box 402, col. 3 lines 31-33) and destination ports information (fig. 4 box 406, col. 3 line 27).

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Therefore it would have been obvious to one of ordinary skill in the art, having both Bremer and Demange before him/her and with the teachings [a] as shown by Bremer, a system for processing packet data and the corresponding packet-related data independently, and [b] as shown by Demange, Ethernet packet headers contain a pointer to memory and destination ports information, to be motivated to modify the system of Bremer by using a packet having a header format as detailed by Demange (fig. 4) if the network is a Ethernet network. This modification can be performed in software. This would improve the system by making it compatible with preexisting standards.

***Allowable Subject Matter***

9. Claims 22-24 are allowed.
10. Claims 4, 6, 10-12, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
11. The following is a statement of reasons for the indication of allowable subject matter.

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Regarding claims 4 and 17, nothing in the prior art of the record teaches or fairly suggests the first stage queue includes multiple first queues, the data stored in a specific first queue based on a characteristic of the packet, in combination with the other limitations listed in the claims. In contrast, Bremer teaches this limitation for the second stage queue.

Regarding claim 6, nothing in the prior art of the record teaches or fairly suggests the packet characteristic is a network protocol type, in combination with the other limitations listed in the claim.

Regarding claim 10, nothing in the prior art of the record teaches or fairly suggests the packet characteristic is a data packet, in combination with the other limitations listed in the claim.

Regarding claims 11 and 12, Bremer teaches multicasting (col. 6 lines 18-37), the method is different than the applicant's.

Regarding claim 22, nothing in the prior art of the record teaches or fairly suggests storing in the second stage queue

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associated with the identified destination port the retrieved pointer to memory, in combination with the other limitations listed in the claim.

***Prior art is of record***

12. The prior art is of record but not relied upon in the office action. Ramakrishnan (6,049,546) teaches multiple first and second queues as specified by the applicant (fig. 3).

***Response to Arguments***


13. Applicant's arguments, see pg. 8 last paragraph, filed 7/23/2003, with respect to the rejection(s) of independent claim(s) 1, 13, and 21 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Bremer. Bremer does teach the newly added limitation "storing in a second stage queue **based on a characteristic of the packet.**" As stated above, this limitation is disclosed (Bremer fig. 3 box 72, col. 6 lines 10-17).

**Conclusion**

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (703) 306-5622. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

  
Ronald Abelson  
Examiner  
Art Unit 2666

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DANGSTON  
PRIMARY EXAMINER